Doc code :IDS Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-08)
Approved for use through 05/31/2008. OMB 0651-0031
Ormation Disclosure Statement (IDS) Filed
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	Application Number		10567073	
	Filing Date		2006-02-03	
INFORMATION DISCLOSURE	First Named Inventor Bryan		1	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		1656	
(Not for Submission under or or it 1.00)	Examiner Name	Willia	m Moore	
	Attorney Docket Numb	er	4115-181	

	U.S.PATENTS Remove										
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue D)ate	Name of Pate of cited Docu	entee or Applicant ment	Releva		Lines where	
	1										
If you wish to add additional U.S. Patent citation information please click the Add button.											
U.S.PATENT APPLICATION PUBLICATIONS Remove											
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publica Date	tion	Name of Pate of cited Docu	entee or Applicant ment	Releva		Lines where les or Relev	
	1	20030166162	A1	2003-09	J-04	Van Rooijen, Gijs, et al.					
If you wisl	h to ac	dd additional U.S. Publis	shed Ap	plication	citation	n information p	lease click the Add	d button	. Add		
	FOREIGN PATENT DOCUMENTS Remove										
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²		Kind Code ⁴	Publication Date	Name of Patentee Applicant of cited Document	∍ or V F	vhere Rele	or Relevant	T5
	1										
If you wish to add additional Foreign Patent Document citation information please click the Add button Add											
			NON	I-PATEN	NT LITE	RATURE DO	CUMENTS		Remove		
Examiner Initials* Cite No Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.							T 5				

Application Number		10567073
Filing Date		2006-02-03
First Named Inventor Bryan		
Art Unit		1656
Examiner Name William		m Moore
Attorney Docket Number		4115-181

1	BAIER, K. ET AL., "Evidence for propeptide assisted folding of calcium dependent protease of the cyanobacterium Anabaena", "European Journal of Biochemistry", Aug. 1996, Page(s) 750-755, Volume 241	
2	BECH, L. M. ET AL., "Mutational replacements in substilisin 309", "European Journal of Biochemistry", May 1,1992, Page(s) 869-874, Volume 209	
3	BECH, L. M. ET AL., "Significance of Hydrophobic S4-P4 Interactions in Subtilisin 309 from Bacillus", "Biochemistry", January 1993, Page(s) 2845-2852, Volume 32, Number 11	
4	BRYAN, P. ET AL., "Energetics of Folding Subtilisin BPN", "Biochemistry", April 1, 1992, Page(s) 4937-4945, Volume 31, Publisher: American Chemical Society	
5	BRYAN, P. ET AL., "Catalyis of a Protein Folding Reaction: Mechanistic Implications of the 2.0 A", "Biochemistry ", June 1995, Page(s) 10310-10318, Volume 34, Publisher: American Chemical Society	
6	BRYAN, P. ET AL., "Prodomains and protein folding catalysis", "Chem. Rev. ", 2002, Page(s) 4805-4816, Volume 102, Number 12	
7	CAO, J. ET AL., "The Propeptide Domain of Membrane Type 1-Matrix Metalloproteinase Acts as an Intramolecular Chaperone when Expressed in ", "Journal of Biological Chemistry", September 22, 2000, Page(s) 29648-29653, Volume 275, Number 38	
8	CARTER, P. ET AL., "Engineering enzyme specificity by 'substrate-assisted catalysis", "Science", July 24, 1987, Page (s) 394-399, Volume 237, Number 4813	
9	CARTER, P. ET AL., "Dissecting the catalytic triad of a serine protease ", "Nature", April 7, 1988, Page(s) 564-568, Volume 332	
10	CAWLEY, NIAMH X. ET AL., "Activation and Processing of Non-anchored Yapsin 1 (Yap3p)", "J. Biol. Chem.", January 2, 1998, Page(s) 584-591, Volume 273, Number 1	
11	CRAIK, C. ET AL., "The Catalytic Role of the Active Site Aspartic Acid in Serine Proteases", "Science", Aug. 21, 1987, Page(s) 909-913, Volume 237, Number 4817	
 _		

Application Number		10567073
Filing Date		2006-02-03
First Named Inventor Bryan		
Art Unit		1656
Examiner Name Willian		m Moore
Attorney Docket Number		4115-181

12	ESTELL, D.A. ET AL., "Probing Steric and Hydrophobic Effects on Enzyme-Substrate Interactions by Protein", "Science", August 8, 1986, Page(s) 659-663, Volume 233, Number 4746	
13	FABRE, E. ET AL., "Role of the Proregion in the Production and Secretion of the Yarrowia lipolytica Alkaline Extracellular Protease", "The Journal of Biological Chemistry", Feb. 25, 1991, Page(s) 3782-3790, Volume 266, Number 6	
14	FUKUDA, R. ET AL., "The Prosequence of Rhizopus niveus Aspartic Proteinase-1Supports Correct Folding and Secretion of Its Mature Part in Sac", "The Journal of Biological Chemistry", April 1, 1994, Page(s) 9556-9561, Volume 269, Number 13	
15	GALLAGHER, T.D. ET AL., "The prosegment-subtilisin BPN' complex: crystal structure of a specific 'foldase'", "Structure", September 15, 1995, Page(s) 907-914, Volume 3, Number 9	
16	GRON, HANNE, ET AL., "Extensive comparison of the substrate preferences of two subtilisins as determined with peptide substrates which are", "Biochemistry", 1992, Page(s) 6011-6018, Volume 31	
17	GRON, HANNE, ET AL., "Studies of binding sites in the subtilisin from bacillus lentus by means of site directed mutagenesis and kinetic", "Subtilisin Enzymes: Practical Protein Engineering", 1996, Page(s) 105-112, Publisher: Plenum Press, Published in: New York	
18	GRON, HANNE, ET AL., "Interdependency of the binding subsites in substilisin", "Biochemistry", 1992, Page(s) 8967-8971, Volume 31, Publisher: American Chemical Society	
19	HEDSTROM, L., "Serine Protease Mechanism and Specificity", "Chem. Rev.", November 23, 2002, Page(s) 4501-4523, Volume 102	
20	KHAN, A. ET AL., "Molecular mechanisms for the conversion of zymogens to active proteolytic enzymes", "Protein Science", 1998, Page(s) 815-836, Volume 7	
21	MARIE-CLAIRE, C. ET AL., "The Prosequence of Thermolysin Acts as an Intramolecular Chaperone when Expressed in trans with the Mature Sequence in E", "J. Mol. Biol. ", Jan. 1999, Page(s) 1911-1915, Volume 285	
22	NIRASAWA, SATORU ET AL., "Intramolecular chaperone and inhibitor activities of a propeptide from a bacterial zinc aminopeptidase", "Biochem. J. ", 1999, Page(s) 25-31, Volume 341, Published in: GB	
 _		

Application Number		10567073
Filing Date		2006-02-03
First Named Inventor Bryan		
Art Unit		1656
Examiner Name Willian		m Moore
Attorney Docket Number		4115-181

23	PANTOLIANO, M. ET AL., "Large Increases in General Stability for Subtilisin BPN through Incremental", "Biochemistry", June 21, 1989, Page(s) 7205-7213, Volume 28, Publisher: American Chemical Society	
24	PERRONA, J. ET AL., "Structural basis of substrate specificity in the serine proteases", "Protein Science", Jan. 1995, Page(s) 337-360, Volume 4	
25	RHEINNECKER, M. ET AL., "Engineering a Novel Specificity in Subtilisin BPN", "Biochemistry", February 9, 1993, Page(s) 1199-1203, Volume 32, Number 5, Publisher: American Chemical Society	
26	RHEINNECKER, M. ET AL., "Variants of Subtilisin BPN with Altered Specificity Profile", "Biochemistry", February 9, 1993, Page(s) 221-225, Volume 33, Publisher: American Chemical Society	
27	RUAN, B. ET AL., "Stabilizing the Subtilisin BPN' pro-domain by phage display selection: how restrictive is the amino acid code for maximu", "Protein Science", July 1998, Page(s) 2345-2353, Volume 7	
28	RUAN, B. ET AL., "Rapid Folding of Calcium-Free Subtilisin by a Stabilized Pro-Domain Mutant", "Biochemistry", May 4, 1999, Page(s) 8562-8571, Volume 38, Number 26, Publisher: American Chemical Society	
29	RUAN, B. ET AL., "Engineering Subtilisin into a Fluoride-Triggered Processing Protease Useful for One-Step Protein Purification", "Biochemistry", October 31, 2004, Page(s) 14539-14546, Volume 43, Number 46, Publisher: American Chemical Society	
30	RUAN, B. ET AL., "Engineering Substrate Preference in Subtilisin: Structural and Kinetic Analysis of a Specificity Mutant", "Biochemistry", April 30, 2008, Page(s) 6628-6636, Volume 47, Number 25, Publisher: American Chemical Society	
31	RUVINOV, S. ET AL., "Engineering the Independent Folding of the Substilisin BPN' Prodomain: Analysis of the Two-State Folding versus Protein ", "Biochemistry", 1997, Page(s) 10414-10421, Volume 36, Publisher: American Chemical Society	
32	SAUTER, N. ET AL., "Structure of a-lytic protease complexed with its pro region", "Nature Structural Biology", November 1998, Page(s) 945-950, Volume 5, Number 11	
33	SHINDE, U. ET AL., "Folding Pathway mediated by intramolecular chaperone", "Proc.Natl. Acad. Sci.", August 1993, Page(s) 6924-6928, Volume 90	
	•	

Application Number		10567073
Filing Date		2006-02-03
First Named Inventor Bryan		
Art Unit		1656
Examiner Name William		m Moore
Attorney Docket Number		4115-181

	34	SORENSON S. ET AL., "Mutational Replacements of the Amino Acid Residues Forming the Hydrophobic", "Biochemistry", June 1, 1993, Page(s) 8994-8999, Volume 32, Publisher: American Chemical Society					
	35	STRAUSBERG, SUSAN ET AL., "Catalysis of a Protein Folding Reaction: Thermodynamic and Kinetic Analysis of Subtilisin BPN' Interactions with Its Pro", "Biochemistry", May 19, 1993, Page(s) 8112-8119, Volume 32, Number 32, Publisher: American Chemical Society					
	36	VENTURA, S. ET AL., "Mapping the Pro-region of Carboxypeptidase B by Protein Engineering", "THE JOURNAL OF BIOLOGICAL CHEMISTRY", July 9, 1999, Page(s) 19925-19933, Volume 274, Number 28					
	37	WANG, L. ET AL., "Prodomain mutations at the Subtilisin Interface: Correlation of the binding energy and the rate of ctalyzed folding", "Biochemistry", Jan. 1995, Page(s) 415-420, Volume 15, Publisher: American Chemical Society					
	38	WANG, L. ET AL., "Engineering the Independent Folding of the Subtilisin BPN' Pro-Domain: Correlation of Pro-Domain Stability with the Rate", "Biochemistry", Jan. 1998, Page(s) 3165-3171, Volume 37, Number 9, Publisher: American Chemical Society					
	39	WELLS, J ET AL., "Cloning, sequencing and secretion of Bacillus amyloliqifacens Subtilisin in Bacillus subtilis", "Nucleic Acids Research ", October 1983, Page(s) 7911-7925, Volume 11, Number 22					
	40	WETMORE, D.R. ET AL., "Roles of the Propeptide and Metal lons in the Folding and Stability of the Catalytic Domain of Stromelysin (Matrix Metal", "Biochemistry ", 1996, Page(s) 6549-6558, Volume 35					
	41	WINTHER, J. ET AL., "Propeptide of carboxypeptidase Y provides a chaperone-like function as well as inhibition of the enzymatic activity", "Proc. Natl. Acad. Sci.", October 1991, Page(s) 9330-9334, Volume 88					
	YAMAMOTO, YOSHIMI ET AL., "Proregion of Bombyx mori Cysteine Proteinase Functions as an Intramolecular Chaperone to Promote Proper Folding of the M", "Archives of Insect Biochemistry and Physiology ", Jun. 1999, Page (s) 167-178, Volume 42						
If you wis	If you wish to add additional non-patent literature document citation information please click the Add button Add						
		EXAMINER SIGNATURE					
Examiner	Signa	Date Considered					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Application Number		10567073
Filing Date		2006-02-03
First Named Inventor Bryan		
Art Unit		1656
Examiner Name Willia		m Moore
Attorney Docket Number		4115-181

¹ See Kind Codes of USPTO Patent Documents at <u>www.USPTO.GOV</u> or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.